Municipal Sewage Regulation

Guidelines for Assurance Plans - A Companion Document to the Municipal Sewage Regulation

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Pollution Prevention and Remediation

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I. Introduction

These guidelines are designed to assist dischargers, qualified professionals, expert consultants and the Ministry of Environment, Lands and Parks ("Ministry") with the preparation, review, and administration of assurance plans submitted under the new *B.C. Municipal Sewage Regulation* ("Regulation"). Although assurance plans do not apply directly to local government or the financial community, they may still find the guidelines to be of some use.

The Municipal Sewage Regulation Implementation Committee ("MSRIC"), which was established by the Ministry to provide guidance and direction for the implementation of the new Regulation, oversaw the development of these guidelines as carried out by Grant Thornton LLP and CrossPoint Strategies.

A. What is an Assurance Plan?

Under schedule 1, condition 5 of the Regulation, dischargers must provide financial security for any private residential development that has a sewage facility. There are three options available: post financial security in the form of a capital replacement fund and cash security; partner with local government to ensure the discharge is under a local service area bylaw; or ensure the discharge is registered or covered by an approved assurance plan.

With respect to the latter, the assurance plan is intended to ensure that dischargers have sufficient managerial, technical and financial resources available to provide for the ongoing operation and maintenance of a sewage facility. More specifically, the Regulation states the following:

> *...'assurance plan' means a program, the insurance instruments of which are provided by a company registered under the Insurance Act with the Superintendent of Insurance, having sufficient quality assurance and technical, financial and management resources to provide, or warrant the provision of, repairs to, or operation, maintenance or replacement of each sewage facility registered under the program. (see Schedule 1, condition 5 sub-condition (2) of the Regulation)*

In keeping with the overall intent of this definition and the Regulation, a properly prepared assurance plan consists of the following components:

- completed template (appended to these guidelines) duly authorized by a signing authority of the discharger;[1]

[1] *It is important to note that when the discharger signs the assurance plan, he/she is committing to comply with all aspects of the plan pursuant to the Regulation and these guidelines.*

- descriptions of the potential failures and planned risk mitigation measures;
- supporting documentation (e.g. relevant company policy or procedures manuals);
- evidence of insurance coverage, as selected and described in the assurance plan; and
- evidence of other financial guarantees as selected and described in the assurance plan.

As implied by this list, and to avoid any confusion, "assurance" does not have the same meaning as "insurance." Rather, insurance coverage is one type of financial assurance provided by the discharger. The term "assurance," therefore, does not refer to any specific instrument, but rather to the resulting state of confidence created by any or all of the financial and non-financial assurances put forward by the discharger.

B. What is the Purpose of Financial Assurance?

If risks are not properly identified and managed, then sewage facility "failure" can expose the government and the public to potentially significant liabilities. This is particularly the case in the event of "orphan plants", where the developer abandons a facility with no plan or resources in place to ensure its ongoing operation and maintenance.

Sewage tfacilities are subject to two general types of failure, the first type being "premature" failure due to design flaw, accidents or catastrophes. Insurance products are typically available to insure against most of these types of risk. The second type of risk is "predictive" failure, and arises from poor plant management and/or insufficient funding to take corrective action.

Assurance plans set out the combination of risk mitigation measures that will be taken, and the insurance and financial guarantees that are being put in place, to protect against both premature and predictive plant failures. In so doing, the plan is not intended to replace or to duplicate any existing assurance products and services. Rather, dischargers are expected to incorporate into the plan any available assurance products and services that apply to their situation.

These financial guarantees and insurance policies, in turn, provide the means to correct sewage facility failures. When assembling these financial assurances, dischargers should ensure that there will be sufficient funds available to remedy a failure and to provide for a re-commissioning phase. This recognizes that in the course of ongoing facility operation, the discharger is responsible for covering the costs of replacing worn-out components, correcting minor problems, and carrying out preventative maintenance. These items are not considered failures for the purpose of the assurance plan, since through proper life cycle budgeting and other mitigation measures, the discharger can control and plan for these costs. Consequently, the discharger should not access the financial guarantees provided under an assurance plan to cover normal operating costs.

C. Who Holds Responsibility for the Assurance Plan?

The discharger, who can be an individual or a corporation (refer to the definition in the Regulation) is responsible for the assurance plan, although it can delegate any or all components of the plans preparation to specialists, consultants, and suppliers. This notwithstanding, a signing officer of the discharger must accept responsibility for the assurance plan and duly authorize it.

An assurance plan will include performance and financial assurances from a number of different entities involved in the operation and maintenance of the sewage facility. For example, equipment suppliers may provide warranties or guarantees and an insurance company may provide extra expense business interruption insurance. The discharger must ensure that the proper contractual relationships and other legal safeguards are in place with its various suppliers and consultants so that the performance and financial assurances of all of the entities involved in the facility will "flow through" to the discharger.

D. When Can One Utilize the Assurance Plan?

Dischargers developing projects that are subject to the Regulation may choose an assurance plan as a voluntary option for providing performance and financial assurances. The assurance plan is an alternative to posting a capital replacement fund (security), or to arranging, in partnership with a local government, for a local service area.

The assurance plan option is also available to owners (operators) of existing facilities now under permit when a change in quantity or quality of effluent triggers application of the Regulation. Furthermore, provisions of an assurance plan, in whole or part, are likely applicable for other sewage treatment projects where the project stakeholders believe that the concepts and tools as set out in these guidelines help to meet their needs and objectives.

E. Why are These Guidelines Necessary?

More guidance is required for the dischargers who wish to, and/or the qualified professionals that have been engaged to help, prepare a sound assurance plan, as well as for expert consultants that have been contracted with to review these plans. Use of the guidelines will give the Ministry more confidence in the quality of the assurance plans submitted and in the recommendations of the expert consultants (described later in this document). Specifically, these guidelines are designed to ensure that:

- the process is as transparent as possible;
- dischargers are aware of the range of acceptable financial and performance assurances;
- assurance plans are of a consistent and sufficient quality;
- dischargers are treated fairly and equitably;

- the coverage and conditions under which the funds can be accessed are consistent between plans;
- all assurance plans are evaluated in the same manner; and
- inferior plans can be clearly identified.

It is likely that the assurance plan process will become easier and less costly for those dischargers who have successfully taken a number of projects through the process. Over time, these dischargers will likely develop standardized approaches to risk assessment and mitigation, as well as for the packaging of financial instruments. Furthermore, as more industry experience is gained and the demand for related professional advisory services increases, one may see the emergence of companies that offer a bundle of assurance plan products and support at a competitive price.

F. What are the Types of Assurance Plans?

The Ministry envisions three types of assurance plans, depending on the number of owners/dischargers submitting, and facilities. These three types of plans can be described as: simple plans, branch plans, and pool plans. In any of these scenarios, the facility(ies) may be operated by the discharger's employees or by a contractor.

Exhibit I-1: Summary of assurance plan types

		NUMBER OF DISCHARGERS	
		One Discharger	Multiple Dischargers
NUMBER OF FACILITIES	One Facility	SIMPLE PLAN—the assurance plan is submitted by one discharger and covers a single facility	Not Applicable
	Multiple Facilities	BRANCH PLAN—the assurance plan is submitted by a single discharger and it covers multiple facilities owned by that same discharger	POOL PLAN—the assurance plan is submitted by a dedicated assurance entity on behalf of multiple dischargers, and covers multiple facilities

Phased projects can be covered by the assurance mechanisms outlined in these guidelines. More specifically, the first phase of a sewage treatment project can have its own assurance plan. The discharger then has the flexibility to determine how assurance will be provided for subsequent phases of the project. One option in this regard is to "roll" new phases of a project into the original assurance plan. Ultimately, the chosen approach should satisfy the interests of both the discharger and the Ministry.

G. What are the Pre-requisites for an Assurance Plan?

Dischargers must comply with the requirements of the Regulation. As alluded to earlier, these requirements include risk mitigation strategies, which are integral to the discharger's performance assurances. In particular, the regulatory requirements listed below must be met in order for the discharger to be in compliance with his or her assurance plan:

- use of qualified professionals;
- use of certified operators;
- design plan;
- operating plan;
- environmental impact study;
- monitoring; and
- Code of Practice for Water Reuse (where applicable).

II. The Benefits of Assurance Plans

The purpose of this section is to outline the Provincial objectives for, and potential interest of local governments in, assurance plans, as well as the benefits that can be realized by dischargers.

A. Provincial Objectives

The Ministry has four objectives for assurance plans, namely that they:

- eliminate financial risk to the Province and local governments (i.e., to the general taxpayer);
- ensure continuity of service to users of the facility;
- protect public health and the environment; and
- do not result in an unreasonable cost to the discharger submitting the assurance plan.

B. Local Government Interest in Assurance

Both municipalities and Regional Districts have an interest in assurance plans as a tool to support the development of private and government owned sewage facilities in their jurisdiction. These guidelines provide standard templates and mechanisms that can augment the risk management tools of local governments in this regard.

C. Benefits of Assurance Planning for Dischargers

Assurance planning offers significant benefits for dischargers, their suppliers and partners. More specifically, assurance planning leads companies to take a disciplined approach to risk management, which is a key aspect of sound project management.

Proactive companies already undertake assurance planning in that they:

- identify potential risks of failure;
- develop and implement risk mitigation strategies;
- arrange for appropriate insurance coverage; and
- ensure financial resources will be available throughout a project's life cycle.

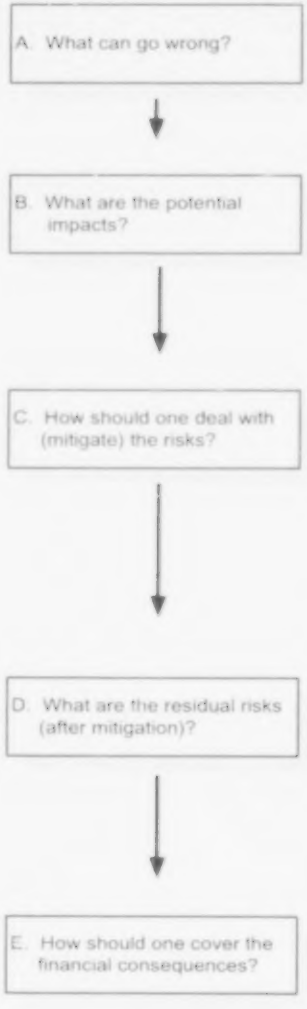
Companies that don't manage risks properly are susceptible to bearing the costs of damaging events and failures, which may result in them becoming financially insolvent.

These guidelines were designed to provide companies with a convenient and easy to use template to do assurance planning for the benefit of their own business. The systematic approach underlying these guidelines, therefore, is intended to help dischargers to minimize project development and operational costs.

III. Risk Management Framework

Assurance plans are intended to be an output of sound risk management planning. It is important, consequently, to describe what constitutes a risk management framework. Essentially, the framework comprises five distinct steps, as illustrated below.

Exhibit III-1: Risk management framework


A. What can go wrong?
B. What are the potential impacts?
C. How should one deal with (mitigate) the risks?
D. What are the residual risks (after mitigation)?
E. How should one cover the financial consequences?

- A sewage facility can "fail" at any point during its life cycle, including the design, construction, operations, and decommissioning stages.
- Risks that will affect the operations and maintenance phase are the focus for the assurance plan. Sewage facilities are susceptible to a number of different human, system, and physical failures in this regard.

- Plant failure can lead to any number of impacts, including customer service interruption, environmental damage, community economic or social impairments, public health impacts, legal liabilities, and financial costs.
- Dischargers should properly manage the risks that can lead to these negative impacts. They should also provide for sufficient financial resources in the event of failure to ensure the ongoing proper functioning of the sewage facility, thereby preventing the negative impacts from occurring.

- Dischargers should carefully assess the various risks (i.e., potential failures) and choose an appropriate mitigation strategy(s). There are three distinct strategies to choose from in this regard:
  - prevent the failure from occurring,
  - reduce the likelihood of the failure occurring, or
  - accept the risk (i.e., take no action).
- Subject to the strategy that is adopted, there are many potential risk mitigation measures that a discharger can take. Certain requirements of the Regulation serve as risk mitigation measures and, therefore, they can reinforce the discharger's strategy.

- As a result of implementing the mitigation measures, the overall risk profile of a sewage facility will have been reduced. In other words, the facility is subject to less "risk" because the discharger has taken steps to either prevent failures or to reduce the likelihood of their occurrence.
- Accordingly, the need for financial resources to ensure ongoing plant operations and maintenance has been reduced as well. This proactive approach to managing risks should result in a lesser requirement for financial assurance and lower costs for the discharger.

- As mentioned, there are two types of financial coverage depending on whether the failure is premature or predictive. Specifically, insurance instruments are used for premature failures, while financial guarantees, as defined by these guidelines, are used for predictive failures. Insurance products are available in the marketplace for most types of premature failures and risks that could be experienced by sewage facilities. The remaining or residual risks should be covered by financial guarantees, such as sinking funds, warranties, and surety bonds, where appropriate.

IV. The Process for Assurance Plans

The purpose of this section is to set out the process for developing, approving and maintaining assurance plans.

The assurance plan process is derived from the risk management framework described in the foregoing section. These guidelines are designed to apply the principles of risk management in a practical manner, thereby making it as easy as possible for the discharger to understand and to prepare an assurance plan.

The process goes through three stages, as set out below and described in the following paragraphs:

Stage 1: Preparation of the Assurance Plan
Stage 2: Review and Approval of the Assurance Plan
Stage 3: Administration and Maintenance of the Assurance Plan

Stage 1: Preparation of the Assurance Plan

A template for an assurance plan is attached. Dischargers, or their qualified professional(s), should use this template in order to facilitate the review and approval process. More specifically, the template should be completed, signed, and submitted by the discharger to the Ministry together with any supporting documentation. This documentation should include a completed operating plan, environmental impact study and design plan as described in the Regulation.

The template provides a work sheet that can be applied for each type of significant failure for a sewage facility. The discharger, therefore, should complete these work sheets using the blank form provided in the template. The work sheets have three main parts: risk assessment and mitigation, assessment of residual risk, and financial assurance. The following paragraphs describe and explain each part.

Risk Assessment and Mitigation

The first step is an assessment of the potential risks and failures that are inherent in the operation and maintenance of sewage facilities. The most common reasons for plant failure are listed, by risk category, in the table on the following page. Dischargers should also identify any other risks relevant to their plant that are not on this list and fill out a corresponding worksheet. Dischargers are asked to assess the relevance and likelihood of each possible failure for their operation.

After assessing the risks, the types of measures that will be employed to mitigate or deal with the risks need to be indicated along with the rationale for the chosen measures (including when "no action" is chosen). The template simplifies the task

by providing a menu of mitigation measures to choose from. These mitigation measures are described in greater detail in the Appendix A.

Although requirements of the Regulation serve to mitigate a number of the risks, they are not sufficient to mitigate all of them. Therefore, dischargers should consider what additional risk mitigation steps they need to take.

After completing all of the work sheets, dischargers should describe each mitigation measure they intend to employ, using the summary form provided and attaching any supporting documentation. Risk mitigation measures need not conform exactly to those described in the Appendix A, although dischargers should describe any differences.

Table IV-1: Common potential risks for sewage facilities

ALL PLANS		POOL PLANS*	
Risk Category	**Potential Reason for Failure**	**Risk Category**	**Potential Reason for Failure**
Design & Construction	• Faulty design (planning) of facility • Improper specification (sizing, capacity) of technology and materials • Faulty building materials or workmanship	Technical	• Computer network failure • Inability to properly monitor multiple sites
		Management	• Poor communications with membership • Weak marketing
Equipment & Operations	• Equipment has reached end-of-life • Inadequate maintenance • Inappropriate modifications • Incidental mechanical breakdown • Introduction of inappropriate or deleterious substances • Natural catastrophe • On-site accident (damaging event) • Power failure • Spill or release of substances	Financial	• Escalating overhead costs • Excessive claims • Insufficient number of pool members • Miscalculation of premium rates • Poor assessment of risks • Poor financial administration
Management	• Failure to retain qualified professional to advise on operation and maintenance procedures that relate to the sewage facilities • Failure to monitor or to submit monitoring reports • Employee negligence or incompetence • Loss of key personnel leading to inability to operate plant • Loss of reuse application for reclaimed water • No transfer of operating and maintenance responsibility after development phase		
Financial	• Worker injury leading to disruption in operations • Subcontractor or supplier goes bankrupt (becomes insolvent)		
Other	• Improper assumptions (estimates) of revenues, costs and user fees • Poor financial administration • Risks arising from insurance policy exclusions		

Assessment of Residual Risks

Dischargers are to assess and indicate the amount of risk remaining assuming implementation of the mitigation measures. This includes providing an estimate of the associated financial value of the residual risk. To assist dischargers with the former, a rating of low, medium, or high residual risk has been provided along with definitions for the different risk levels.

The estimated financial value, in turn, will assist dischargers and financial institutions with designing an appropriate combination of financial guarantees and insurance products. In other words, the amount of financial assurance provided by various instruments (e.g. surety bonds, guarantees) should be consistent with the estimated financial value of the residual risk.

Financial Assurance

The last part of the template is where dischargers indicate the composition of their financial assurance package. For each potential failure, dischargers are asked to indicate the insurance coverage and financial guarantees being provided, as applicable. Again, the template provides a menu of choices to simplify the task.

As alluded to above, it is possible to offer more than one type of instrument for a particular failure, so as many as apply should be indicated. For example, to protect against equipment failure, a discharger may purchase Boiler and Machinery ("B&M") insurance and then provide a sinking fund to "top up" the insurance, thereby ensuring 100% coverage.

The menu that is provided includes standard insurance instruments and financial guarantees. If dischargers wish to put forward other types of financial assurance, then they must describe the instrument and the reasoning underlying its choice.

When choosing financial assurances, it is important to weigh the relative attractiveness of the various instruments from the perspective of both the discharger and the Ministry. An ideal instrument for one party may not be as desirable for the other party. A good example in this regard is sinking funds. Whereas governments prefer sinking funds because they are highly liquid, companies tend not to like them because they tie up cash, which could be invested elsewhere. In general, dischargers should attempt to find a balance that can satisfy both parties.

The nature of the financial assurances may also depend on the legal structure of the discharger. For example, a discharger controlled by a single shareholder is limited in terms of the range of guarantees that can be provided, whereas a corporation with shareholdings by several entities may have more alternatives and offer a different financial assurance package.

In keeping with the intent of the assurance plan, dischargers have flexibility in the selection and packaging of insurance products and financial guarantees.

Generally, the greater the demonstrated managerial and technical ability of the discharger to manage the potential risks of plant failure, the more latitude the discharger has in the selection and commitment of financial assurance instruments.

The Ministry will give due consideration to the discharger's proposed financial assurance package. Notwithstanding, if the financial assurances are deemed to be inadequate, the Ministry has the responsibility and the authority to require the discharger to provide better alternatives.

Stage 2: Review and Approval of the Assurance Plan

The Regulation requires that an expert consultant review assurance plans. Dischargers must, at their own expense, engage the expert consultant, who is selected from an approved roster maintained by the Ministry.

The purpose of the expert consultant is to review the assurance plan presented by the discharger and to advise the Ministry on its relative strengths and areas for improvement. Further detail on the responsibilities of the expert consultant can be found in the appended Responsibility of Position Statement. Ideally, the assurance plan will be sound before it is sent to the expert consultant. This will minimize the discharger's costs and any delays to the sewage treatment project.

It is important for the expert consultant to maintain independence and objectivity in conducting their role. To help prevent conflicts of interest, the Regulation states that:

> "the [discharger] must not select a consultant from the roster that has been involved in developing the assurance plan being reviewed or has a personal or business relationship with the person requiring the review."

The expert consultant's findings and recommendations must be appended to the assurance plan before the plan is submitted to the Ministry for approval. The expert consultant will also send a copy of his or her report to the discharger for information purposes. On receipt of the assurance plan that has the findings of the expert consultant appended, "the Director may approve the plan provided the Director is satisfied that it adequately provides for sufficient quality assurance and technical, financial and management resources to provide operations, maintenance, repairs or replacement of the sewage facilities."

Stage 3: Administration and Maintenance of the Assurance Plan

If the discharger chooses to use the assurance plan option, then that plan must be maintained unless it is replaced by another approved financial security option (refer to the Introduction for a brief description of the other options and the specific-cross reference to the Regulation) or until the users of the sewage facility no longer need the sewage treatment service.

This section sets out the requirements for administering and maintaining assurance plans. These requirements will vary depending on whether the assurance plan is a simple plan, a branch plan, or a pool plan.

Annual Report

As stated in the Regulation, "the discharger (in the case of a simple plan or a branch plan) must, on or before March 31 in each year, provide to the director an annual report detailing what quality assurance and technical, financial and management resources are in place under the assurance plan and how effective the quality assurance and technical, financial and management resources have been during the previous calendar year."

Providers of pool plans must submit annual reports as well. In addition to the elements described in the previous paragraph, pool plan providers should report on the following aspects:

- change in number of dischargers participating in the pool;
- claims experience among other items; and
- other items (as specified by the Ministry).

The discharger may wish to re-engage the expert consultant who reviewed the original assurance plan to review the annual report before submitting it to the Ministry. This step would expedite the process for all parties. The expert consultant, who is already familiar with the case, can help the discharger to identify and measure those aspects of the assurance plan that will be of interest to the Ministry.

On receipt of the annual report, the director may require the discharger or the pool plan provider, as the case may be, to either amend the assurance plan or to submit a new assurance plan to the director for review and approval.

Keeping The Assurance Plan Current

Operating and maintaining a sewage facility is not a static situation, since there is always change. New risks may emerge, potential financial impacts of failure may increase, conditions of insurance polices have to be met and premiums have to be paid. Dischargers must constantly monitor their operating environment and current conditions and determine the implications for their assurance plan.

A key objective is to ensure that performance and financial assurances are never allowed to lapse – there should be continuous coverage. Assurance plans should evolve to reflect changes, with dischargers amending their plan(s) or taking other actions as required to keep them current. They must also continue to comply with the terms of their financial instruments. By not keeping a plan current, the discharger is vulnerable to failures and is not in compliance with the Municipal Sewage Regulation.

It should also be recognized though, that a discharger may be able to make the case to reduce or change the mix of financial assurances (so that they are less onerous to the discharger) over time as management and system reliability are proven.

Contingency Plan for Lapsed Financial Assurance

The discharger must provide the Director with a contingency plan that will provide for ongoing financial assurance in the event of a lapse of one or more insurance or financial instruments. For example, the discharger may offer a letter of credit of sufficient value to bridge a gap in coverage or he or she may pay a series of insurance premiums in advance.

Notification of Changes to the Assurance Plan

The Ministry should be kept informed about changes to the assurance plan. Timing for notifying the Ministry depends on the type of change. Any change that could jeopardize the integrity of the plan will be subject to approval by the Director.

- **Updates and Amendments – Normal Course of Business**

  Where changes are made to the assurance plan by the discharger to stay current, and these changes can be considered as part of the normal course of business (i.e. they do not increase a facility's overall risk profile), then they should be disclosed in the annual report.

- **Updates and Amendments – Extraordinary Change**

  Where amendments to an assurance plan are the result of unforeseen events or are unplanned, and are significant in scope, then the discharger should notify the Director immediately upon becoming aware of the need for the amendment.

  An extraordinary change is one where a facility's overall exposure to risk, and hence need for financial assurance, increases substantially. Examples of extraordinary changes are a significant increase in cost exposure (and, as a result, in the value of insurance required), a significant increase in insurance policy deductibles, or the substitution of one type of financial assurance instrument with another instrument. "Rolling" new phases of a sewage treatment project into an existing assurance plan would also constitute an extraordinary change.

- **Cessation of Coverage by an Assurance Plan**

  A discharger with a sewage facility that is subject to the Regulation must assure "that the potential cost, whenever it may arise, of the full

replacement of the sewage facility will be covered" (Schedule 1, condition 5, sub-condition (1)). If the facility ceases to be covered by an approved assurance plan, for whatever reason, then the discharger must provide a capital replacement fund (see same reference) or provide for a local service area bylaw with the local government. There must never be a lapse in assurance coverage, whatever form it may take.

Cessation of coverage by an approved assurance plan can occur as a result of any number of reasons such as voluntary withdrawal from an assurance plan, termination of insurance or assurance policies, or a significant change in the financial viability of the operation.

If the cessation is planned or predictable, then the discharger should notify the Director in writing at least thirty days in advance of the date of the cessation of coverage. In any case, if the discharger's facility ceases to be covered by an approved assurance plan, the discharger must notify the Director in writing within thirty days of the change in status (Schedule 1, condition 7, sub-condition (3)).

Upon request, the discharger should also arrange to make the Ministry a beneficiary on all insurance policies in which the Ministry wishes to be a beneficiary. This will provide for notification to the Ministry as well as enable it to access funds under the policy if necessary, even if the discharger no longer exists.

Furthermore, dischargers should make their insurance providers responsible for giving the Director notice if an insurance policy is cancelled (e.g. for non-payment of premiums, material increase in risk profile). Notice of cancellation is a condition of the agreement between the discharger and the Ministry. To enable this notice, the discharger will give a copy of his or her agreement with the Ministry to an insurance agent. The insurance agent, in turn, will arrange for the insurance company to endorse the requirement for notification of cancellation as part of the policy. The agent will also obtain a Certificate of Insurance that the discharger can then provide to the Ministry. It should be further noted that if a local government(s) has identified a specific interest in a particular discharge(s) covered by an assurance plan, the Ministry will notify the local government(s) if an insurance policy affecting the local government's interest is cancelled.

- **Switching Plans**

Dischargers who switch from one type of assurance plan to another should notify the Director at least thirty days in advance of the date of the change in status. For example, if a discharger switches from their own simple plan to participate in a pool plan, or if a discharger wishes

to roll a simple plan into a branch plan as a result of adding more facilities, then he or she should provide thirty days notice.

- **Change in Facility Ownership**

  A discharger who transfers ownership of the sewage facility to another party, thereby effecting a change in the party responsible for the assurance plan, must report this change in ownership to the Director at least thirty days in advance of the transaction's completion date.

Overall, whenever a discharger makes an extraordinary change to an assurance plan or switches assurance plans, or when the ownership of a facility changes, then the amendments should be reviewed by an expert consultant with the amended assurance plan subsequently being submitted to the Director for final approval.

Change in Ownership of Facility

When ownership of a sewage facility changes, then responsibility for the facility's assurance plan is transferred to the new owner and the necessary supporting documentation must be completed. This is necessary to ensure the ongoing operation and maintenance of the facility. For example, it is important that the elements of the assurance plan for a new residential subdivision are properly transferred from the developer to the strata corporation when the developer leaves the project or when the corporation is formed.

Course of Action in the Event of Failure of Assurance Plan

Assurance plans fail when they do not provide for the ongoing operation and maintenance of a sewage facility as intended. For example, they can fail because dischargers did not anticipate certain risks or they underestimated the potential impacts of a failure. Or, they can fail as a result of the discharger not properly implementing the mitigation strategies.

Ideally, dischargers in partnership with their expert consultant(s) and the Ministry will be able to identify a deficient assurance plan before it is too late (i.e., there is still enough time to take corrective action). If, however, a plan fails before these actions can be taken, and the Province suffers damages, then the Ministry will take whatever legal recourse it has available to recover the damages.

V. Utilizing the Financial Assurance

This section describes how the various insurance instruments and financial guarantees can be utilized. The policies will differ for simple or branch plans and for pool plans.

A. Simple and Branch Plans

Ideally, financial assurance instruments never have to be utilized – they exist only as a safeguard. In the case of a failure, however, the discharger or the Ministry may need to access the financial resources made available through these instruments. This notwithstanding, the Ministry prefers that the discharger assume responsibility for, and have the financial capacity to remedy, the consequences of a failure.

There may be instances, however, where the Ministry has no choice but to become involved in dealing with the consequences of a failure and has to have access to the financial resources provided through the assurance plan.

The triggers for accessing funds from insurance policies are relatively straightforward. Policies and procedures for making insurance claims are well established and understood by insurance experts. The Ministry does not expect to become involved in dealing with failures that are covered by insurance – the discharger and his or her insurance agent can deal with these incidents and mitigate their consequences unless no action is taken by the discharger within a reasonable period of time.

In the case of financial guarantees (i.e. the non-insurance instruments), the Regional Managers ("Manager") of the Ministry will use their discretion to decide when to access the funds available. There are a number of possible failure scenarios that may trigger access to a financial guarantee, for example:

- abandoned plant;
- interruption of service; and
- lapse or cancellation of insurance policies or financial guarantees.

The rules (e.g., when accessible, for what purpose) for accessing funds under financial guarantees will be set out in an agreement between the discharger and the Ministry. This agreement must be in place prior to final approval of the plan. Some types of instruments, such as surety bonds, have standard terms and conditions for their use.

Monitoring, according to the requirements of the Regulation, is critical to the integrity of the assurance plan. Information obtained through proper monitoring can detect potential failures in advance of their occurrence, ideally providing enough time to correct the problem.

When utilization of a financial guarantee is triggered, and if the Ministry must become involved, then the Manager will normally access the funds from the financial guarantee that is linked to the failure. For example, the discharger may have provided a letter of credit for equipment failure. The discharger will set out these linkages (between potential failures and financial guarantees) in the assurance plan (see template attached). There may be cases, however, where the discharger and the Director agree that a financial guarantee to cover multiple types of failure (i.e. a financial assurance "package") must be provided. In this case, the Manager will tap into this "package" financial guarantee, when warranted and to the extent required to cover relevant costs.

In general, the Manager will give dischargers a reasonable amount of time to fix a failure before utilizing a financial guarantee. The Manager will always try to communicate with the discharger before taking such action. This might entail sending written notification to the discharger that the financial guarantee will be utilized if the discharger does not repair the facility within a reasonable time, as specified by the Manager.

The Financial Instruments and Their Use

There are many types of financial assurance instruments. The purpose of this section is to describe some of the more common ones. Each one will have different advantages and disadvantages from the perspectives of the discharger and the Ministry. The discharger should assemble a financial assurance package that strikes a balance between the interests of the discharger and the interests of the Ministry.

Generally for financial assurance instruments, the discharger is in control of the activities and events for which the funds were established. So there is an incentive for dischargers to reduce the size and risk of payout from the funds by implementing the planned risk mitigation measures.

With respect to the financial guarantees proposed by the discharger, the Ministry shall approve the form of the guarantee to ensure that they are binding.

Table V-1: Financial assurance instruments

Insurance Instruments	Financial Guarantees
Boiler and Machinery Insurance - Provides "sudden and accidental" coverage in the case of premature equipment failure (outside warranty).	**Captive Insurance** – Captive insurance is where one or more companies in a joint venture specially incorporate an insurance company. Typically, a captive operates through reinsuring business from a "fronting company" which is already licensed to do business in the jurisdiction in which the sponsoring companies desire coverage.

Table V-1: Financial assurance instruments continued

Insurance Instruments	Financial Guarantees
Extra Expense Business Interruption Insurance – Provides coverage for extra costs incurred to quickly effect replacement of lost property as well as for the extra expenses to carry on business, possibly at another site on an interim basis. This insurance is triggered by property loss covered by boiler & machinery or by property insurance.	**Cash Deposits** – This type of deposit refers to cash, cheques, term deposits, certificates of deposit and other cash equivalents that are highly liquid and have fixed cash value. Cash deposits can be submitted as once-and-for-all payments, or can be undertaken as a series of payments over time. They may be held in consolidated revenue funds, suspense accounts, or trust deposit accounts that facilitate tracking of the funds and to ensure they are kept separate for specified purposes.
Errors & Omissions (E&O) Insurance – Generally carried by the design and engineering team. Covers the team against suits arising from design faults.	**Deposit of Other Assets** – These are deposits of assets other than cash and cash equivalents. They can include stocks, bearer bonds, property, and accounts receivable. Governments may not be as receptive to these deposits compared to cash deposits, as their market value is often difficult to determine (predict) and they are less liquid.
Key Person Life Insurance – To facilitate replacement of a critical person, this policy will provide immediate funds should a key employee be unavailable due to death or disability.	**Equipment or System Supplier Warranty** – The manufacturer provides a warranty for individual equipment components and/or the system supplier warrants the whole system (structure) to meet certain standards. The trend is for performance-based warranties whereby the supplier provides assurances that the system will meet effluent discharge standards. The purchaser may want some assurance that the company will have the financial resources to live up to the warranty.
Pollution Liability Insurance – Covers the negligent acts of the insured that cause environmental damage and resulting cleanup costs. There are two types: sudden and accidental insurance (must be identified and reported quickly) and environmental impairment insurance (where pollution has been gradual and identified late). Pollution insurance should be put into place in time to cover a plant's testing and commissioning phase.	**Corporate Guarantee** – Under a corporate guarantee, the company enters into a contract with another corporate entity (usually a parent company) stipulating that the external obligations of the company will be met by the corporate entity. Corporate guarantees are often unacceptable to governments because the guarantor's financial strength is difficult to assure over time.
Property Insurance – Protects the facility (building and contents) for the full replacement value on an "all risks" basis. This will include, but not be limited to, damage caused by fire, earthquake, flood, vandalism, collapse, and theft.	**Letters of Credit** – A letter of credit is issued by a financial institution to guarantee that the obligations of the company, to a maximum amount, would be met by the financial institution. It specifies the terms under which the credit would be available (e.g. for a specific purpose, under a maximum payout, and over a specific time period) from the financial institution if the company fails to meet its obligations.

Table V-1: Financial assurance instruments continued

Insurance Instruments	Financial Guarantees
Single Project Professional Liability Insurance – Similar to Errors & Omissions insurance, except the coverage is specific to a project. The limit can be selected based on the perceived exposure relative to the particular job. The Single Project Professional Liability policy can be amended to include limited pollution coverage for the escape of contaminants resulting from errors in design provided the pollution occurs suddenly and not over a protracted period.	**Pledge of Assets** – A pledge of assets (e.g., land, physical capital, inventories, accounts receivable) is a legal document allowing the government or financial institution to place a lien (legal claim) on specific assets of a company if it fails to meet its obligations. In short, this provides government or financial institution with the right to confiscate and liquidate specific assets and use the proceeds to meet the company's commitments. Governments may not accept pledges for assets where future market value is uncertain.
Third-Party Insurance/General Liability Insurance – Indemnifies against liability for third party bodily injury and property damage claims arising out of the discharger's negligence. Also provide for defense costs. In most cases would exclude pollution liability insurance.	**Security in Escrow** – Securities in escrow are documents, real estate, money, or other securities deposited by a company with a neutral third party (the escrow agent) to be delivered upon fulfillment of certain conditions or the performance of some duty, as established in a written contract.
Workers Compensation Insurance – All employees of the discharger and of the subcontractors are required to have workers compensation coverage (see Workers Compensation Board).	**Self Insurance** – Well financed companies may back up their obligations by the strength of their financial positions, promising that costs will be funded through cash and the conversion of company assets when needed. Although this assurance provides companies with flexibility, governments may insist that a fronting agreement be provided through an insurance company that promises to honour the financial obligations in case of default.
	Surety Bonding – Surety bonds are contracts between a company and a qualified financial institution (the surety). In effect the surety agrees to stand in place of the company, to meet its financial or performance obligations. There are two kinds of bonds: payment and performance. A payment bond will provide for a standby trust fund in an amount equal to the value (penal sum) of the bond. Performance bonds can be acquired with respect to the meeting of specifications, either for the facility itself or for the facility operation.
	Trust Fund – A trust holding fund is comprised of a single payment or a series of periodic payments from a company, plus any returns from the investment of those payments, with disbursements used solely for stated purposes (e.g., repair, operation, maintenance, replacement or improvement of the sewage facility). In the event that the fund was inadequate, the company would be required to submit the outstanding balance.

Assessment of Financial Strength

The strength of a discharger's financial assurances depends on its ability to meet the qualifications for insurance policies and guarantees. This applies both initially, when the discharger is assembling the financial assurances, and on an ongoing basis when the discharger must periodically demonstrate an ability to meet tests of financial viability.

Where the discharger offers the Ministry its own financial guarantee(s) as part of the assurance plan (e.g. self insurance, corporate guarantee), the expert consultant and the Ministry will assess the discharger's ability to fulfill the guarantee(s) should it ever be required. In so doing, they may employ standard industry practices, analytical techniques, financial indicators/ratios, and/or independent financial assessment services. The expert consultant and the Ministry may also assess the financial strength of the providers of insurance, surety bonds, and other instruments.

Replenishing financial assurance

After a financial assurance has been utilized to address a failure, the discharger must immediately top up or re-establish the insurance or financial guarantee that was used (or alternatively provide for a new capital replacement fund or a local service area bylaw) and notify the Ministry accordingly. The discharger should review the situation at this time to also determine whether any change in the type and amount of coverage is warranted. Further, where the discharger amends the assurance plan as a result of the failure, the amendment should be reported to the Ministry immediately, as is the case for any extraordinary amendments.

B. Pool Plans

It is conceivable that dischargers will find it desirable to establish some form of cooperative (i.e. a "pool") to provide for financial assurances. There are few, if any, precedents or models to draw from in the design of pooled financial assurance plans for sewage facilities. Generally, there will be two parties, namely the pool's management entity or administrator and the Ministry. In order for the pooled approach to work, the management entity (administrator) will have to enter into binding relationships with the pool members or subscribers.

There is a great deal of scope in how the pool can require its members to provide for financial assurances. Essentially, the management entity can utilize the concepts and tools described in these guidelines to design the pool's financial assurance program. The management entity, however, will have to demonstrate how the financial assurances flow through the pool management entity to the Ministry. This is necessary in case the pool cannot meet its obligations. Ultimately, the pool can be viewed as a "master discharger" who must follow these assurance plan guidelines just like dischargers with simple or branch plans.

Appendix A

Description of Selected Risk Mitigation Measures

1. Management and Operations

Company Report Card – A company report card based on a satisfaction survey of previous customers can provide useful information for risk mitigation. It can provide independent, reliable, comparable, and objective information about a company's track record. Report card subscribers could see both areas of excellence and areas of potential concern in the companies they are evaluating. Industry may choose to introduce such a report card.

Effective Contracts – Many risks can be managed through the use of effective contracts. Industry associations have produced standard contract templates with wording that anticipates and mitigates against various risks.

Life Cycle Budget – Plant maintenance can deteriorate if there is insufficient cash flow for a proper maintenance program. A life cycle budget leads the discharger to project the costs of a maintenance program over the life of the plant. This information should be an important factor in the setting of user fees and for financial planning for the plant.

Management Qualifications and Experience – Relevant management expertise is critical for successful risk mitigation. The expert consultant and the Ministry will be interested in the qualifications, experience, training, and track record of the management team. The team encompasses senior managers of the discharger, design consultants, operators, system suppliers, and maintenance staff. The types of skills that are of interest include project and employee management, risk management, business management, sewage facility design and operation. Certain performance indicators will be of interest, such as ability to meet effluent standards during commissioning phase, not having any facilities on the non-compliance list, good track record of successful plants, and satisfied customers. In accordance with Section 22 of the Regulation, a certified operator must operate sewage facilities.

Membership in Industry Association – Being a member in good standing in a recognized industry or professional associations will be of interest. More specifically, these associations should have a code of ethics and a disciplinary process that makes the members accountable.

Ownership Stake in the Sewage Facility - Ownership stakes in a sewage facility by the operator of the facility and/or by the users/customers would provide an incentive to take responsibility for the facility. One example is to give homes a non-transferable ownership

share in the sewage facility. This share remains with the home, existing in perpetuity through successive generations of homeowners. The share enables homeowners to regulate pricing, to set influent standards, and to ensure that proper financial assurance is in place to prevent service disruption, among other powers. In the case of the system operator, a large investment in the system by the operations and maintenance company would indicate self-interest to keep it running.

Preventative Audits – A positive attribute for evaluating a company's risk management capability is the presence of a preventative audit program. A properly designed program will monitor all aspects of the sewage facility and its operation that could lead to "failures" if not managed and controlled. The program could be conducted by the discharger's in-house staff or by outside professionals.

Property Access – If the sewage facility depends on access to someone else's property for any purpose associated with the discharge or reuse of treated effluent, then securing that right is critical. Obtaining an interest in land by way of an easement is a legal means of solving this problem. An easement is a right enjoyed by one land owner over the land of another and is obtained for a specific limited purpose (e.g., the right to pass back and forth over the land of another to get to one's own land) rather than general use and occupation of the land.

Source Control Policies - The operation of sewage facilities can be impaired by the introduction of inappropriate or deleterious substances into the influent by the users. A source control policy can be adopted which provides clear directions to users about the influent parameters that must be met. The policy can be made binding through a contract. The discharger could require the users or the strata corporation to purchase an insurance policy, which pays out in this event.

Third Party Review of Business Plan – Review of a sewage facility's business case by a suitably qualified professional would give greater confidence in the business viability of the service. Both a preventative (planning stage) and detective (operations stage) reviews should be considered. The third party should look at issues like number of users, user fees, fee revenue projections, return on investment, financial management systems, debt/equity ratios, etc. The outside professional may use sensitivity analysis or scenarios to assess how changes in key assumptions can impact the financial viability of the plant.

2. Design and Technology

Backup for Power Failure – Electrical power failure is a key risk for a sewage facility. Designers and operators have developed a number of approaches for dealing with power failures, including having a backup power supply, extra tankage for holding influent/effluent (e.g., 48 hours capacity), and by having a alternative for discharging treated effluent.

Certified Technology – The sewage treatment industry has a number of standards and certification processes that can be applied, including the National Sanitation Foundation NSF 40 and 41, the Environmental Technology Verification Program, and B.C. Ministry

of Health approval under the innovative technology program. These programs can provide some level of assurance about the equipment or technology. However, one must also recognize the limitations of these certifications, in particular, on-site conditions may be different from the conditions present during testing and certification, and, only the component may be certified not the whole system. Of course, technology itself is just a part of a project's overall risk profile.

Equipment Redundancy Policies – The average time to failure of mechanical components is predictable, based on historical data. Dischargers should have a maintenance plan that can address these predictive failures. As required by the Regulation, strategies to provide built-in redundancies or "duplex systems", or to provide an on-site inventory of spare parts ("hot spares") must be included.

Pilot Projects for New Technologies – New technologies present a challenging risk management problem. Progressively larger pilot projects or further research can be used to introduce new technologies at a relatively low risk. Further research may confirm or disprove the reliability of new technology.

Site Investigations – For sewage facilities the effectiveness of sewage treatment and conveyance facilities depends a great deal on local conditions. Site investigations can assess the discharge alternatives, the characteristics of the influent, the potential for negative impacts on neighbours, the environment, the soil and watertable conditions, and so on. This mitigation measure should be used in the design phase.

Technical Review Committee – The aim of such a committee would be to improve the design, installation, maintenance, and operation of sewage facilities by "rendering and documenting expert advice and recommendations on issues such as site evaluation, design standards, and practices, technology selection, installation standards and practices, equipment certification, and operating and maintenance practices." Industry may choose to activate this committee and employ it as a risk mitigation measure for assurance plans.

Technology Track Record – A technology's track record of performance is an indication of risk exposure. A technology's ability to consistently comply with effluent standards, to maintain customer service, and to operate within the maintenance budget are indicators of reliability. From this perspective, when developing a sewage facility, incorporating the lessons of the past experience and reducing the number of new design elements can reduce exposure to risks and costs. On the other hand, one should leave scope for innovation and continuous improvement.

Turnkey Contracts - Single point accountability for infrastructure projects can be a powerful incentive to manage risks. Under design-build-operate scenarios, the project proponent has an incentive to design for reliable and cost-effective operations and maintenance because he/she will bear the costs or rewards. Dischargers should look for mechanisms that encourage life cycle planning and analysis.

Appendix B

TEMPLATE FOR AN ASSURANCE PLAN

For Use by Discharger

_____

Name of Discharger

_____

Date

TABLE OF CONTENTS

Section 1: Directions

Section 2: Risk Worksheet

Section 3: Assurance Plan Summary

Section 4: Terms and Conditions

Section 5: Attachments

DIRECTIONS

This template consists of a risk work sheet, a framework for your assurance plan summary, and terms and conditions.

Please complete a work sheet for each potential risk that is relevant to your project (see Table 1). Complete a work sheet for any additional risks not included in the table on page 9 but which you believe is relevant to your project. A blank master work sheet, suitable for photocopying is provided.

The next step is to prepare your assurance plan, based on the information from your completed risk work sheets. Finally sign your assurance plan and submit it with any attachments.

Proponents of pool plans should contact the Ministry to discuss the assurance plan approval process.

Type of Risk:

(Refer to Table IV-1)

1. **How likely do you think it is for this failure to occur (before any risk mitigation)?**—Check, ✓, the appropriate response

Low				High
❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
Not expected to occur during the facility lifetime	Expected to occur no more than once during facility lifetime	Expected to occur several times during the facility lifetime	Expected to occur more than once per year	Expected to occur frequently

2. **What mitigation measures do you propose for this potential failure (in addition to the requirements of the Regulation)?**—Circle , ✎, the appropriate code(s) corresponding to as many of the measures you propose to implement (see the risk mitigation measures code menu on next page)

A B C D E F G H I J K L M N O P Q R S T

Other (please specify):_____

Explain the rationale behind your choices (attach additional material as required):

3. **How would you rate the level of remaining (residual) risk?**—Check, ✓, the appropriate response

Low		High
❑ 1	❑ 2	❑ 3
No risk to begin with or virtually eliminated by mitigation measures	**Some** degree of risk remains even after mitigation measures	**Significant** degree of risk remains, even after mitigation

Describe the remaining (residual) risk (attach additional material as required):

4. **What is the potential financial implication (for the ongoing operations and maintenance of the sewage facility) of this failure?**—Check, ✓, the appropriate response

< $100,000	$100,000 – $500,000	$500,000 - $1 Million	$1 – 2 Million	$2 – 5 Million	> $5 Million
❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6

5. **Indicate the insurance and/or financial guarantees you are proposing to cover this risk**—Circle , •, the appropriate code(s) corresponding to as many of the instruments you are using (see the financial assurance instruments code menu below)

Insurance Coverage:

a b c d e f g h i j-other: _____ N/A

Financial Guarantees:

k l m n o p q r s t u v-other: _____ N/A

6. **What is the total value of the insurance coverage?** $_____ N/A

7. **What is the total value of the financial guarantees?** $_____ N/A

Prepared by: _____ **Date:** _____

Menu of Risk Mitigation Measures		Menu of Financial Assurance Instruments	
Code	**Measures**	**Code**	**Measures**
A	None/no action		
Management and Operations		**Insurance Instruments**	
B	Company report card	a	Boiler and machinery insurance
C	Effective contracting	b	Extra expense business interruption insurance
D	Life cycle budget	c	Errors and omissions insurance
E	Management qualifications and experience	d	Key person life insurance
F	Membership in industry association	e	Pollution liability insurance
G	Ownership stake in the sewage facility	f	Property insurance
H	Preventative audits	g	Single project professional liability insurance
I	Property access	h	Third party (general liability) insurance
J	Source control policies	i	Workers compensation insurance (WCB)
K	Third party review of business plan	j	Other
	Design and Technology	**Financial Guarantees**	
L	Backup for power failure	k	Captive insurance
M	Certified technology	l	Cash deposits
N	Equipment redundancy policies	m	Corporate guarantee
O	Pilot projects for new technologies	n	Deposit of other assets
P	Site investigations	o	Equipment or system supplier warranty
Q	Technical review committee	p	Letters of credit
R	Technology track record	q	Pledge of assets
S	Turnkey contracts	r	Security in escrow
T	Other	s	Self insurance
		t	Surety bonds
		u	Trust fund
		v	Other

ASSURANCE PLAN SUMMARY

1. Describe your assurance plan. In your description, ensure that you address each of the topics in the list below.

   - What type of assurance plan is this (simple, branch, pool)?
   - How many facilities are covered?
   - What is the location of the sewage facility(s)?
   - What type of technology/system is being applied?
   - What is the experience of your team with this type of technology/system?
   - Who will operate and maintain the facility?
   - How many personnel will be involved to operate the facility?
   - How will you manage the assurance plan?
   - Describe the key risks of your facility/operation drawing on the completed risk worksheets.
   - How would you describe the overall risk profile of your facility/operation after implementation of the risk mitigation measures?
   - What is your contingency plan in the case of a lapsed assurance plan?

2. Review your working sheets for all of the potential failures. Note which choices you have made from the risk mitigation and financial assurance menus. For each selection made (i.e., circled codes), please provide a brief description using this summary form and if not applicable mark "N/A". Attach any supporting details or documentation.

Summary of Risk Mitigation Measures
(Provide a brief description for each measure used; attach additional information)

Code	Measures	Description
A	None/no action	
Management and Operations		
B	Company report card	
C	Effective contracting	
D	Life cycle budget	
E	Management qualifications and experience	
F	Membership in industry association	
G	Ownership stake in facility	

Summary of Risk Mitigation Measures
(Provide a brief description for each measure used; attach additional information)

Code	Measures	Description
H	Preventative audit	
I	Property access	
J	Source control policies	
K	Third party review of business plan	
Design and Technology		
L	Backup for power failure	
M	Certified technology	
N	Equipment redundancy policies	
O	Pilot projects for new technologies	
P	Site investigations	
Q	Technical review committee	
R	Technology track record	
S	Turnkey contracts	
T	Other	

Summary of Financial Assurance Instruments

Code	Measures	Description	Total Value ($)
Insurance Instruments			
a	Boiler and machinery insurance		
b	Business interruption insurance		
c	Errors and omissions insurance	-	
d	Key person life insurance		
e	Pollution liability insurance		
f	Property insurance		
g	Single project professional liability insurance		
h	Third party (general liability) insurance		
i	WCB		
j	Other		

Summary of Financial Assurance Instruments

Code	Measures	Description	Total Value ($)
Financial Guarantees			
k	Captive insurance		
l	Cash deposits		
m	Corporate guarantee		
n	Deposit of other assets		
o	Equipment or system supplier warranty		
p	Letters of credit		
q	Pledge of assets		
r	Security in escrow		
s	Self insurance		
t	Surety bonds		
u	Trust funds		
v	Other		

TERMS & CONDITIONS

1. Comply with the requirements of the B.C. Municipal Sewage Regulation.
2. Implement the planned risk mitigation measures.
3. Keep the assurance plan current.
4. Notify the Director immediately upon becoming aware of extraordinary events affecting the assurance plan.
5. Should notify the Director in writing at least thirty days in advance of the date of any cessation of financial assurance coverage, if the cessation is planned or predictable.
6. Should notify the Director in writing immediately upon becoming aware of any cessation of financial assurance coverage, if the cessation is sudden and unexpected.
7. Arrange for the insurance company to endorse the requirement for notification to the Director of policy cancellation directly onto the insurance policy.
8. Make the Ministry an insured under certain circumstances, as appropriate.
9. Attach Certificates of Insurance to this plan and to annual reports.
10. Attach evidence of financial guarantees to this plan and to annual reports.
11. Notify the Director at least thirty days in advance of the date of switching from one assurance plan to another assurance plan.
12. Report a change in facility ownership to the Director at least thirty days in advance of the transaction's completion date.
13. Arrange for a running covenant to be placed on the title to the property on which the sewage facility is established or equivalent mechanism that will make successive owners aware of their obligations for performance and financial assurances under an assurance plan.
14. Acknowledge that if the assurance plan fails and the Province suffers damages, then the Ministry will take whatever legal recourse it has available to recover the damages.
15. Provide a financial assurance instrument that the Regional Manager can access in the event of the discharger's failure to monitor or to submit monitoring reports as per the Regulation.
16. Acknowledge that the Regional Manager has the right to tap into financial guarantees when warranted and to the extent warranted, as per these guidelines.

The Ministry will give due consideration to the discharger's proposed assurance plan. Notwithstanding, the Ministry does not have to accept the discharger's proposed plan. If the plan is inadequate, the Ministry has the authority and responsibility to direct the discharger to submit better alternatives.

_____

Signed by (signing authority for discharger)

_____

Date

Appendix C

TEMPLATE FOR A REVIEW OF AN ASSURANCE PLAN

For Use by Expert Consultant

_____
Date

STATEMENT OF QUALIFICATIONS

Position: Expert Consultant

Reports to: Ministry of Environment, Lands and Parks

Role of Position:

To consistently and objectively review Assurance Plans presented by dischargers and to advise the Ministry of Environment, Lands and Parks on their reasonableness, comprehensiveness and practicality.

Acceptable Professional Designations

- Degree in Engineering and registration as a P.Eng.
- Chartered Accountant (CA) designation.
- Chartered Insurance Professional (CIP) or Fellow, Chartered Insurance Professional (FCIP).
- Certified Management Consultant (CMC).
- Certified General Accountant (CGA).
- Certified Management Accountant (CMA).

Risk Certification Options

- Engineering specialization in Procurement and Risk Management Strategies for Large Projects.
- Certification from the Institute of Risk Management.
- Risk Management course component of the CIP.

Professional Liability Insurance Options

- Member of a professional association that provides appropriate insurance coverage.
- Individual holds a valid professional liability insurance policy.

Functional Expertise Requirements

Technical

- Knowledge of the operation of sewage facilities.

Financial

- Demonstrated knowledge of risk management and financial assurances as they pertain to Assurance Plans.

Project Administration and Delivery

- Proven ability to assemble and direct multi-disciplinary teams and contractors.
- Ability to communicate effectively in writing and orally.
- Able to use good judgement in a fair and consistent manner.
- Experience working with government agencies at the local, provincial or federal level.

RESPONSIBILITY OF POSITION STATEMENT

Position: Expert Consultant

Reports to: Ministry of Environment, Lands and Parks

Position Summary:

To consistently and objectively review Assurance Plans presented by dischargers and to advise the Ministry of Environment, Lands and Parks on their reasonableness, comprehensiveness and practicality.

Position Responsibilities:

General

- Review in a consistent and objective fashion the Assurance Plans presented by dischargers based on the guidelines prepared under the BC Municipal Sewage Regulation.
- Review the managerial, technical and financial resources available to the discharger to provide for the provision of the ongoing operation and maintenance of a sewage facility.
- Check for completeness of the Assurance Plan in relation to the template provided in the guidelines, including appropriate signatures and enclosure of all necessary supporting documentation and reference materials.
- Advise the Ministry of the reasonableness, sufficiency and practicality of finalized Assurance Plans in relation to the guidelines and associated tools.
- Maintain fair and consistent treatment of all dischargers.
- Provide clear, consistent and documented reasoning in support of noted strengths and weaknesses of an Assurance Plan.
- Provide information to dischargers relating to the possible ramifications of not providing an acceptable Assurance Plan.

Risk Assessment and Mitigation

- Check that the discharger has identified an appropriate range of potential failures for the case in question.
- Ensure that Assurance Plans formally set out the combination of risk mitigation measures that are intended to be taken to protect against both premature and predictive plant failures.
- Assess the rationales for selection of "no action" as a risk mitigation choice or for excluding certain types of risks/failures.

- Assess whether the risk mitigation measures selected are appropriate in relation to the type of risk/failure being addressed.

Residual Risk

- Ensure that dischargers have appropriately assessed and described the degree of residual risk and potential financial impact for each possible failure (post mitigation).
- Assess the reasonableness of the stated financial impacts associated with the residual risks.

Financial Assurance

- Ensure Assurance Plans formally set out the insurance and financial guaranties that would be taken to protect against both premature and predictive plant failures and the project as a whole.
- Ensure supporting evidence of insurance instruments and financial guarantees are attached.
- Assess the appropriateness of insurance and guarantees in relation to the documented potential failures and residual risks.

Responsibilities may be added or eliminated throughout the life of the position. Such additions or deletions will be done in consultation with appropriate parties.